

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 938 054 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
25.08.1999 Bulletin 1999/34

(51) Int Cl.⁶: G06F 17/30

(21) Application number: 99301308.5

(22) Date of filing: 23.02.1999

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

(72) Inventors:
• Liou, Shih-Ping
Robbinsville, NJ 08691 (US)
• Das, Madirakshi
Amherst, MA 01002 (US)

(30) Priority: 23.02.1998 US 27637

(74) Representative: Litchfield, Laura Marie et al
Haseltine Lake & Co.
Imperial House
15-19 Kingsway
London WC2B 6UD (GB)

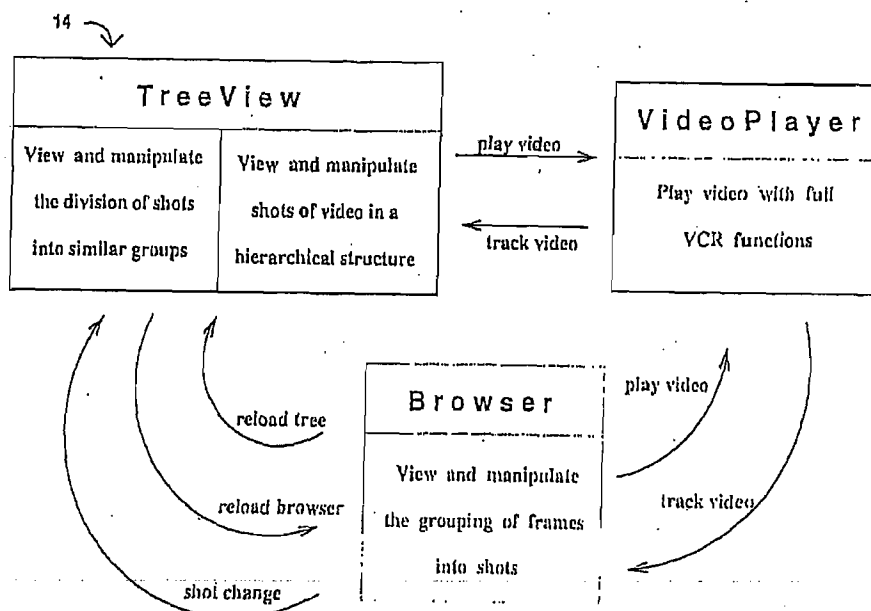
(71) Applicant: SIEMENS CORPORATE RESEARCH,
INC.
Princeton, New Jersey 08540 (US)

(54) A system for interactive organization and browsing of video

(57) A system for interactively organizing and browsing video automatically processes video, creating a video table of contents (VTOC), while providing easy-to-use interfaces for verification, correction, and augmentation of the automatically extracted video structure. Shot detection, shot grouping and VTOC generation are automatically determined without making restrictive as-

sumptions about the structure or content of the video. A nonstationary time series model of difference metrics is used for shot boundary detection. Color and edge similarities are used for shot grouping. Observations about the structure of a wide class of videos are used for the generating the table of contents. The use of automatic processing in conjunction with input from the user provides a meaningful video organization.

FIG. 4



EP 0 938 054 A2